

AMENDMENTS TO THE ABSTRACT:

Please amend the Abstract as follows:

A video game system is described for use with a television type display device including a host video game system housing a game program processor and a programmable special purpose hardware graphics processor. The programmable graphics processor communicates with the host game processor and incorporates an embedded RAM cache memory. The programmable graphics processor has hardware circuitry for performing 3D geometry transformations such as ~~rotating and/or scaling of~~ a 3x3 matrix transformation of x, y and z graphics data to provide 3D rotated and/or scaled polygon-based 3D graphic objects and also includes dedicated hardware for plotting individual pixels. The graphics ~~processor~~ coprocessor utilizes an instruction set that is designed to efficiently implement 3D matrix rotation and scaling operations associated with 3D graphics and also includes special instructions for plotting character-mapped pixels.